

Patent claims

1. A method for decontaminating a clean-room (1; 101), in which the clean-room (1; 101) is supplied with gaseous  $\text{H}_2\text{O}_2$  and  $\text{H}_2\text{O}_2$  still present in the clean-room (1; 101) is chemically broken down without catalyst at a later timepoint by supplying at least one gaseous agent which reacts with the  $\text{H}_2\text{O}_2$ .

2. The method as claimed in claim 1, characterized in that  $\text{H}_2\text{O}_2$  residues in a product situated in the clean-room (1; 101) are subsequently broken down on the product in a targeted manner.

3. The method as claimed in claim 1 or 2, characterized in that the at least one gaseous agent is metered in such a manner that after the chemical breakdown of the  $\text{H}_2\text{O}_2$  at most 1 ppm of  $\text{H}_2\text{O}_2$  still remains in the clean-room.

4. The method as claimed in one of claims 1 to 3, characterized in that the at least one gaseous agent comprises ammonia.

5. The method as claimed in claim 4, characterized in that the ammonia is metered as a function of the  $\text{H}_2\text{O}_2$  in such a manner that the excess of ammonia is at most 500 ppm.

6. The method as claimed in one of claims 1 to 5, characterized in that the at least one gaseous agent comprises hydrazine.

7. The method as claimed in one of claims 1 to 6,

characterized in that the at least one gaseous agent comprises ozone.

8. A system for decontaminating a clean-room (1; 101) having an  $\text{H}_2\text{O}_2$  supply device (2; 102) for supplying the clean-room (1; 101) with  $\text{H}_2\text{O}_2$ , characterized in that it comprises an  $\text{H}_2\text{O}_2$  breakdown device (10; 111-115) for effecting a chemical breakdown of  $\text{H}_2\text{O}_2$  without catalyst in the clean-room (1; 101), which comprises means for introducing at least one gaseous agent into the clean-room (1; 101).

9. The system as claimed in claim 8, characterized in that the means for introducing at least one gaseous agent are constructed to introduce ammonia, hydrazine or ozone into the clean-room (1; 101).

10. The system as claimed in claim 8 or 9, characterized in that the means for introducing at least one gaseous agent into the clean-room (1; 101) have a supply vessel (11) filled with gaseous agent, or a generator (111) for generating gaseous agent, a gas line (13; 113) from the supply vessel (11) or generator (111) to the clean-room (1; 101) and a valve (12, 112) for regulating the amount of the gaseous agent flowing through the gas line (13; 113).

11. The system as claimed in one of claims 8 to 10, characterized in that it has a sensor for measuring the concentration of the gaseous agent (4; 104) in the clean-room (1; 101), the measured values of which serve to control the  $\text{H}_2\text{O}_2$  breakdown device (10; 111-115).

12. The system as claimed in one of claims 8 to 11, characterized in that it has a sensor for measuring the  $\text{H}_2\text{O}_2$  concentration (5; 105) in the clean-room (1; 101), the measured values of which serve to control the  $\text{H}_2\text{O}_2$  breakdown device (10; 111-115).

13. The system as claimed in one of claims 8 to 12, characterized in that the  $\text{H}_2\text{O}_2$  breakdown device has means for generating UV light in the clean-room (1; 101).

14. The system as claimed in one of claims 8 to 13, characterized in that the  $\text{H}_2\text{O}_2$  breakdown device (111-115) and the  $\text{H}_2\text{O}_2$  supply device (102) are integrated into a periphery (103) of the clean-room (101).

15. An  $\text{H}_2\text{O}_2$  breakdown device (10; 111-115) for a system for decontaminating a clean-room (1; 101) according to one of claims 8 to 14.